The opinion in support of the decision being
entered today was not written for publication
and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte JAMES S. PRATER and KEVIN G. CHRISTIAN

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Appeal No. 2000-0720
Application No. 08/648,849

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ON BRIEF

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Before URYNOWICZ, DIXON, and BLANKENSHIP, Administrative
Patent Judges.

URYNOWICZ, Administrative Patent Judge.

Decision on Appeal

This appeal is from the final rejection of claims 1-3, 5-

11, 13-17, 19, 24 and 25. Claims 20-23 are allowed.

The invention pertains to data processing apparatus.

Claim 1 is illustrative and reads as follows:

1. An apparatus for processing data signals
comprising:

a first filter means for adjusting an input signal
received by the first filter means;

a summing means for summing signals from the first
filter means and from a second filter means to produce a
summed signal;

a symbol detection means for generating an output
signal from the summed signal;

the second filter means for adjusting the output
signal; and

a control means for controlling filtering properties
of the first filter means and the second filter means, wherein
the control means controls filtering properties of the first
filter means based on previous data patterns in the input
signal received by first filter means.

The references relied upon by the examiner are:

Fisher et al. (Fisher)   5,132,988   Jul. 21, 1992
Kim   5,654,765   Aug. 05, 1997
                                      (filed Nov. 18, 1994)

Claim 19 stand rejected under 35 U.S.C. § 102(b) as

anticipated by Fisher.

Claims 1-3, 5-11, 13-17, 24 and 25 stand rejected under

35 U.S.C. § 102(e) as being anticipated by Kim.

The respective positions of the examiner and the

appellants with regard to the propriety of these rejections

are set forth in the final rejection and the examiner's answer

(Paper Nos. 8 and 15, respectively) and the appellants' brief

and reply brief (Paper Nos. 13 and 16, respectively).

<u>Appellants' Invention</u>

A summary of the invention is provided at page 7 of

the brief.

<u>The Rejection under 35 U.S.C. § 102(b)</u>

<u>Claim 19</u>

We will not sustain this rejection.

Appellants argue that when data is filtered, Fisher

provides no teaching or suggestion to select a set of

coefficients from a plurality of sets of coefficients based on

previous data patterns transmitted through the equalizer.

We agree. With respect to Figure 2 of Fisher, which is

relied on by the examiner, it is clear that filter unit 36

receives equalizer coefficients W for decreasing data error

rates of data output signals from memory. However, Fisher has

not been shown by the examiner to involve the selection of a

set of coefficients from a plurality of sets of coefficients.

The examiner relied on Fisher's specification at column 7,

lines 10-16 and 34-44, to meet the claim language "selecting a

-3-

set of coefficients within the number of sets of

coefficients…" but there is nothing in these portions of the

specification disclosing a number of sets of coefficients or

selecting a set of coefficients within the number of sets of

coefficients.

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The Rejection under 35 U.S.C. § 102(e)

Independent Claims 1, 11 and 24

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We will sustain the rejection of claims 1 and 11; we will

not sustain the rejection of claim 24.

Kim relates to a channel equalizer for a digital

television receiver. With respect to Figures 4 and 6, Kim

teaches using an error signal $\mathbf{m}k$ from error detector 8 to

adjust a coefficient for a channel and then stores the

coefficient. The coefficient is then used when the channel is

selected.

Appellants argue that updating a coefficient using an

error signal and the selection of a coefficient based on a

channel is not the same as controlling filtering properties

based on previous data patterns (claim 1) or controlling

filter units based on digital data output from a symbol

detector compared to data patterns output by the symbol

<div align="center">-4-</div>

detector in response to data signals previously received

(claim 11).

    We are not persuaded by these arguments. With respect to

Kim's Figures 4 and 6, the coefficients in Kim memory 13 are

from data patterns output by slicer (symbol detector) 7. The

coefficients correspond to all channels of a digital TV

receiver (column 5, lines 34-36). As such, each coefficient

of a channel must be a function of the particular

characteristics of a channel in order to correct for those

characteristics and would be determined utilizing previous

data patterns. This is supported by Kim's disclosure at

column 1, lines 6-14, wherein it is disclosed that "… a

filtering coefficient converging on an optimum value is

obtained for a firstly selected channel when an input signal

of the firstly selected channel is filtered, the obtained

filtering coefficient is stored and the stored filtering

coefficient is used as an initial coefficient for filtering

the input signal when the firstly selected channel is again

selected" (emphasis added). A separate coefficient is

obtained for each channel 2-n in this manner.

A further teaching that coefficients in memory 13 are from previous data patterns is to be found at column 5, lines 41-65. There, Kim discloses that coefficients stored at 13b-13n are derived by utilizing the coefficient from initial coefficient location 13a "… as an initial filtering value when a certain channel is firstly <u>selected</u> and then obtains a filtering coefficient converging on the corresponding channel according to the inputted coefficient." (emphasis added).

Accordingly, with respect to claim 1, Kim Figure 6 teaches a control means 8, 9, 9a and 11 for controlling filtering properties of first filter means 4 and second filter means 6, wherein the control means 8, 9, 9a and 11 controls filtering properties of the first filter means 4 based on previous data patterns in the input signal received by the first filter means (the input signal underlined, above). With respect to claim 11, Kim Figure 6 teaches selection logic unit 8, 9, 9a and 11 connected to first finite impulse response filter unit 4 and second finite impulse response filter unit 6, wherein the selection logic unit controls the first finite impulse response

filter unit 4 and the second finite impulse response filter 6

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based on digital data $\overline{1k}$ output from the symbol detector 7

compared to data patterns output by the symbol detector in

response to the data signals previously received by the

decision feedback equalizer (the data patterns of the input

signal and the channel selection underlined above).

Whereas claims 2, 3 and 5-10 depend from claim 1 and are

not separately argued, we will sustain the rejection of these

dependent claims.

Whereas claims 13-17 depend from claim 11 and are not

separately argued, we will sustain the rejection of these

dependent claims.

We will not sustain the rejection of claim 24, and claim

25 which depends therefrom, because there is no disclosure in

Kim of a plurality of sets of coefficients or control means

for selecting a set of coefficients. Kim only teaches a set

of coefficients in memory 13 of Figure 4.

<u>Summary</u>

In summary:

a) the decision of the examiner to reject claim 19 under

35 U.S.C. § 102(b) as anticipated by Fisher is reversed.

   b) the decision of the examiner to reject claims 1-3, 5-11, 13-17, 24 and 25 under 35 U.S.C. § 102(e) as anticipated by Kim is affirmed as to claims 1-3, 5-11 and 13-17, and is reversed as to claims 24 and 25.

   No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

                              AFFIRMED-IN-PART

STANLEY M. URYNOWICZ JR.   )
Administrative Patent Judge   )
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JOSEPH L. DIXON   ) BOARD OF PATENT
Administrative Patent Judge   ) APPEALS AND
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